Bay Area Air Quality Management District
Risk Screening Assessment, A# 7930
City of El Cerrito Community Center; P# 15548
August 25, 2003

This document describes the basis for the health risk screening assessment prepared for City of El Cerrito Community Center, 7007 Moeser Lane, El Cerrito, California 94530. This facility wishes to operate a new emergency stand-by diesel engine generator. In order to do this, the facility must get a permit from the Bay Area Air Quality Management District (BAAQMD). The BAAQMD, as a routine part of the evaluation of a permit application, prepared this screening risk assessment.

Particulates from diesel engine exhaust, a toxic air contaminant and a carcinogen, will be emitted during the operation of the engines. BAAQMD staff evaluates the possible impact of the diesel exhaust particulate emissions that will occur during routine operation of the diesel engines. The diesel exhaust particulate impact is expressed in terms of the increased risk of contracting cancer by individuals who live or work near the proposed engines.

The estimated increase in diesel exhaust particulate emissions that can be expected from this source is 10.02 pounds per year. Ambient air concentrations of diesel exhaust particulate were predicted using the ISCST3 air dispersion computer model. This model uses information about the facility and the emission rates of toxic air contaminants to estimate what concentrations would be expected in the air at various locations around the site. The estimated concentrations of diesel exhaust particulate are used to calculate the possible cancer risk that might be expected to arise from this exposure.

The potential cancer risk was calculated using standard risk assessment methodology. They include the assumptions that exposures are continuous for 24 hours per day, 7 days per week for 70-years for residential receptors, 8 hours per day, 240 days per year and 46 years for industrial receptors and for students, the assumptions include higher breathing rates for children and that exposures are for 36 weeks per year over a 9-year period. The potential cancer risk was calculated using standard risk assessment methodology. The cancer risk is based on the "best estimates" of plausible cancer potencies as determined by the California Office of Environmental Health Hazard Assessment (OEHHA). The actual cancer risk, which cannot be determined, may approach zero. This type of analysis is considered to be health-protective.

The potential for non-cancer health effects is evaluated by comparing the long-term exposure level to a Reference Exposure Level (REL). A REL is a concentration level or dose at or below which no adverse health effects are anticipated. RELs are designed to protect the most sensitive individuals in the population. Comparisons to RELs are made by determining the hazard index, which is the ratio of the estimated exposure level to the REL.

The proposed operation would result in an increased maximum cancer risk of 1.9 chances in a million and a hazard index of 0.0063 for residntial receptors near the facility. For the maximally exposed industrial receptor the risk is 1.33 in a million and the hazard index is 0.0013. For the students who attend Portola Middle School and Prospect Sierra Middle School, the increased maximum cancer risk is 0.18 chances in a million and the hazard index is 0.00068. These values are for 100 hours of operation per year.

These health risk values, presented in the table below, meet the criteria for acceptable levels established in the BAAQMD's Risk Management Policy.

Health Risk Results		
Receptor	**Increased Maximum Cancer Risk**	**Hazard Index**
Residential	1.90 chances in a million	0.00120
Industrial	1.33 chances in a million	0.00130
Prospect Sierra Middle School	0.18 chances in a million	0.00068
Portala Middle School		

School address:

Portola Middle School
1021 Navellier Street
El Cerrito, CA 94530

Prospect Sierra Middle School
960 Avis Drive
El Cerrito